

Opportunities to Reduce Emissions at Marine Ports

Henry Hogo, Assistant Deputy Executive Officer
Science and Technology Advancement

South Coast Air Quality Management District

SCAQMD Air Toxic Control Plan - Mobile Source Strategies

- Fuel Specification
- After-treatment Technologies
- Engine Design Modifications
- Alternatively-Fueled Vehicles
- Goods Movement
- Engine Idling Time Reduction
- Locomotives
- Locomotive Idling



SCAQMD Air Toxic Control Plan - Mobile Source Strategies

- Commercial Motorboats, Ships, and Tugs
- Airport Emissions
- Aviation Gasoline (lead)
- Off-Road Utility and Mobile Equipment
- Catalysts for Gasoline Powered Vehicles



Heavy-Duty Vehicles/Equipment

- AQMD Credit Rule for Refrigeration Units
- Promote Use of Cleaner Off-road Equipment (Forklifts, Yard Tractors)
- Promote Cleaner Burning and Alternative-fuel Vehicles for Captive Fleets (All Vehicle Sizes)
- Electrification at Loading Docks

Heavy-Duty Diesel Truck Emissions

- New California Heavy-Duty Standards:
October 2002 (not all manufacturers)
2004 (all manufacturers)
- Low-Sulfur Diesel - 2005 (AQMD Rule 431.2)
- Low-Sulfur diesel - 2007 (Federal)
- VOC, NOx & PM - 2008 (State & Federal)

Heavy-Duty Diesel Truck Emissions (cont.)

- Develop Programs to Reduce Emissions
(On road / Off-road)
 - Repowers, PM Trap
 - NOx?
- Promote Alt.-Fueled Truck Applications
- State PM & NOx Mitigation Programs

Existing Funded Projects

- Marine Vessels
 - Number of Vessels: 130
 - Funded Level: \$19.5 M
 - Emission Reduction: 1389 tpy - NOx
55 tpy - PM
- Landside Equipment
 - Number of Equipment: 110
 - Funding Level: \$2.7 M
 - Emission Reduction: 164 tpy - NOx
10 tpy - PM

Diesel Locomotive Emissions

Current Status:

- Railroad MOU -
67% reduction in NOx by 2010
- Industry to Bring Cleanest Engines
Into Basin
- Dev. of Cleaner Locomotive Engines

Diesel Locomotive Emissions (cont.)

Opportunities:

- Work w/ Industry to Use Low-Sulfur Diesel
- Programs to Reduce Locomotive Idling
- Demonstrate New Technologies
(Alternative-Fuel Engines; PM Traps)